

**LUNENBURG DPW BUILDING COMMITTEE
TOWN OF LUNENBURG**

David MacDonald, Chair
Joanna Bilotta, Vice-Chair
Jay Simeone, Clk.
James Breault, Mbr.
Janice Carrier, Mbr.
Steve deBettencourt, Mbr.
Leigh Mezzetti, Mbr.



Minutes

**November 19, 2010
Ritter Building Lower Conference Room
960 Massachusetts Ave
Lunenburg, MA 01462**

Meeting Posted: Yes
Meeting Call to order at 4:35

RECEIVED & FILED

FEB 01 2011

**LUNENBURG TOWN
CLERK OFFICE**

Some concerns of the plan are the location of the septic system. Gregg is looking at 30 Ft. by 50 Ft. septic field with a cost of around \$50,000.00

Existing building: Building code would require modification to the roof channels to help with the snow load depending on height of new addition. Square footage of the mezzanine is tied into the size of the new addition. Gregg commented that the height of the new addition will have an effect on the snow load over the existing garage and office area, and that will have an effect for the structural integrity of the existing roof and mezzanine area.

Existing office area: Demolition of the office area will be done and a new office area created. Some concerns of the office area are: Bathrooms, cubical layout, location of the new stairs for the mezzanine, the size of break room and conference room, file storage. The committee recommended eliminating the existing back stairs to the mezzanine.

Maintenance Garage: Jay recommends blocking off the side garage door and adding a wall for tool room and mechanics office. He also recommends the block wall separating the maintenance garage from the parking garage.

The committee also reviewed the heating and utility system for existing garage, office, and new addition.

The committee reviewed the rendering image of the new building.

The rendering shows the existing building in a tan and brown motif and the new addition being green and brown. A covered overhang over the office entrance.

The new addition has a 4 foot concrete knee wall around it with concrete aprons in front of all garage doors.

The committee then reviewed the budget figures. The budget was broken down into 17 divisions the proposed grand total was \$1,840,891. Gregg proposes this to be a 5 month project.

The committee went line item by line item with Gregg to go over all cost figures.

Jan Carrier noted that she has spoken to the Fire Chief Glenn, in regards to a waiver for the sprinkler system in the building. Per Jan, Chief Glenn stated a variance would need to be obtained from the State.

General Discussion: Scope of work.

The committee went through the budget figures to look at areas that could be reduced or eliminated to get the budget cost down to the approved budget for the building of \$990k. There was an error of \$70K on one of the line items that Gregg is going to revise.

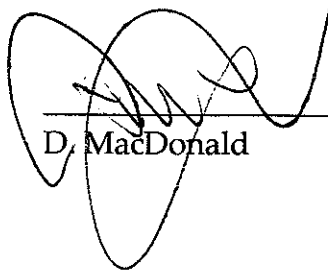
There was considerable decision around the mezzanine, the structural layout of the roof, and how to tie them in with the new addition. The committee feels the office area and mezzanine are important aspects of the project. After considering many options and alternatives, the committee could not see a responsible way to reduce the proposed budget figures, and still keep the integrity of the original building plan. The committee hired Gregg of HKA Architects based on his original conceptual plan he presented to the committee. While the committee liked the conceptual plan Gregg submitted, the cost of the plan is unacceptable. The committee made it clear to Gregg that we have an approved budget figure of \$990K. Gregg needs submit a plan that reflects the needs of the DPW, as outlined in the DPW Building Study proposal, and come in with the Town approved budget figure.

The next meeting will be on Thursday, 12-09-10, at the Ritter Memorial Building @ 4:30 pm.

Motion to adjourn at 7:16 pm.

Respectfully Submitted by:

Jay Simeone
Secretary



D. MacDonald



J. Simeone

MEETING MINUTES
DPW ADDITION/RENOVATIONS

Town of Lunenburg
Ritter Memorial Building
960 Massachusetts Avenue, Lunenburg, MA

CONCEPTUAL DESIGN REVIEW MEETING

19 November 2010 at 4:30 p.m.

Attendees: Dave MacDonald – Town of Lunenburg (TOWN)
Joanna Bilotta – TOWN
Kerry Speidel – TOWN
Jan Carrier – TOWN
Steve DeBettencourt – TOWN
Jay Simeone – TOWN
Jack Rodriquez – TOWN DPW
Jim Beault – TOWN DPW
Leigh Mezzetti – TOWN DPW
Gregg Yanchenko – HELENE-KARL Architects (HKA)
cc: Laura Williams – TOWN
Kevin Seaman – Seaman Engineering Corp. (SEC)
Chris Robinson – SEC
John Murphy – John J. Murphy Jr. Electrical Construction and Engineering, Inc. (JME)
Bob Lie – Lin Associates, Inc. (LIN)
Bill Murray – PLACES Site Consultants, Inc. (PSCL)

Purpose:

To review the schematic design submission and scope.

ACTION

COMMENTS

HKA distributed copies of the conceptual design package to the TOWN. The submission included drawings A-1 to A-5 and H-1 dated 11/19/10, rendering images 1 and 2, conceptual site plan dated 11/10/10 and conceptual cost estimate dated 11/19/10 (see attached). Issues discussed and the TOWN's comments were as follows:

Design Issues:

- HKA/Town
1. HKA opened the discussion by reviewing the scope of work discussed at the Project kick-off meeting on 10/21/10.
 - a. HKA confirmed that the construction budget is \$990K. Note: The TOWN appropriation for the Project is for \$1.1M.
 - b. The TOWN will review the sprinkler system waiver with the Town's Fire Department due to the limited water capacity at the site. The TOWN will coordinate a flow test on the existing well. The TOWN indicated that HKA may need to prepare a letter regarding the water capacity.
 2. Subsequent to the general discussion, HKA presented the conceptual design submission.
 - a. Civil – HKA noted that the new septic system will need a leach field approximately 30'x50' in size. As shown on the drawing, the factors governing the location of the septic system are the utility easement, the 100 year flood plain location and wetlands buffer zones. In particular, the system cannot be installed

ACTION

COMMENTS

in the 100 year flood plain or the 100' wetlands buffer zone. In addition, HKA noted that the ground water elevation will impact the system design. [Note: HKA indicated that the existing building is located at the intersection of three zoning districts.] Based on the limits, HKA does not recommend that the septic system be installed near the existing fuel pumps in order to avoid any potential environmental issues (TOWN concurred). The potential septic system locations are behind the existing building, under the existing sand pile (requiring the sand pile to be removed) or up on the hillside. Other than the sand pile location, the other locations will require a pumped system due to the elevation changes. The basic system will cost approximately \$30K and the pump chamber will add \$20K for a total cost of \$50K.

- b. Structural – The code requires that the existing building be “structurally upgraded” if significant renovations occur. In particular, the edges of the roof deck will need to be reinforced if the roof is replaced. HKA indicated the cost will be approximately \$10K to reinforce the roof perimeter. Likewise, HKA proposes a “flat” roof for the new addition to eliminate any structural upgrades of the existing roof due to snow drifting. HKA indicated that the proposed addition is approximately 2'-10" feet above the existing structure. The snow drift distance is calculated at twice the height of the adjacent building. Hence, the drift area will be approximately 6'-0" and will not require the existing roof to be upgraded.
- c. Architectural – HKA proposes 19'-0" wide vehicle bays and a new mezzanine. HKA indicated that the mezzanine will be attributed to the new building in order to meet the code requirements on allowable areas. Access to the mezzanine will be via stairs adjacent to the Break Room. In addition, HKA proposes a unisex shower to comply with the code. The other proposed areas satisfy the requirements of the original Town program.
- d. Mechanical and Electrical – HKA presented the conceptual layout for the heating system consisting of unit heaters and radiant heat in the garage areas. HKA also indicated that the plumbing will be completely upgraded to include an oil/water separator in the garage and a new electric service will be installed.

HKA

- 3. Subsequent to the general overview, the TOWN's comments were as follows.
 - a. Eliminate the stair to the existing stairs to the mezzanine.
 - b. Expand the Break Room by moving the stairs into the Wash Bay (straight run).
 - c. Block the overhead door at the end of the existing building and create a Mechanic's Office and Tool Room.
 - d. Keep the washer and dryer in the existing Garage as shown.
 - e. Provide the personnel lockers as shown.

HKA

- 4. HKA then presented the conceptual construction cost estimate and advised the TOWN that the scope of work will need to be prioritized. HKA's preliminary cost estimate is \$1.8M. HKA indicated that the City of Worcester recently bid a new 12,000 SF DPW facility and the low bid was \$950K. [Note: HKA acknowledged a typo in the cost estimate for the VCT in the amount of \$80K. If corrected, the overall estimate will be closer to \$1.72M.] HKA noted that the line items driving the costs are the flat roof on the new structure, replacing the existing roof, wash bay equipment and the new mezzanine (totaling approximately \$350K).

The TOWN indicated that the overall cost must be reduced to \$1.1M including design fees, construction and contingencies. The TOWN indicated that the wash bay equipment, new roof for the existing structure and new mezzanine were not in the

ACTION

COMMENTS

original budget presented at Town Meeting. The TOWN also indicated that the new vehicle garage bays were smaller. However, the scope must include new heating and new overhead doors and new windows in the existing structure. The TOWN directed HKA to make the following changes.

- a. Reduce the size of the new vehicle garage bays.
- b. Include the roof on the existing structure as an Add Alternate.
- c. The TOWN will complete the exterior painting of the existing structure under a separate contract.
- d. Do not replace the concrete apron at the existing structure and eliminate the proposed bollards. Also, reduce the concrete apron at the new addition to be 48" similar to the existing structure.
- e. Eliminate the wash bay addition and structure behind the Break Room. Relocate the drain for the wash bay in the main garage addition.
- f. Eliminate the new mezzanine.
- g. Limit the radiant heating system to the Mechanic's Bay only and use unit heaters in the other locations.
- h. Consider the interior masonry walls as an Add Alternate.

Administrative Issues:

- | | |
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| HKA | 5. The TOWN requested that HKA electronically distribute the meeting minutes to the entire Building Committee. |
| | 6. The TOWN confirmed that the existing structure has been tested for asbestos and there are no hazardous materials in the existing building. |
| HKA/TOWN | 7. HKA will coordinate a date and time to dig test pits for the structure and septic system. |
| All | 8. The next submission and meeting has tentatively been scheduled for 12/9/10 at 4:30 p.m. |

The information, herein, reflects HKA's understanding of decisions reached at the meeting noted. Please contact our office within seven calendar days if you have any questions or are not in agreement with the minutes.



**TOWN OF
LUNENBURG**
DWY ADDITION /
RENOVATIONS

DESIGN:
TOWN OF LUNENBURG, MA
2001
LUNENBURG, MA 01543

ARCHITECT:
HELENE-KARL
PROJECT, INC.

CITY ENGINEER:
PLACER & COMPANY, INC.

PLANNING & DESIGN:
PLANNING & DESIGN, INC.

LANDSCAPE ARCHITECT:
LANDSCAPE ARCHITECT, INC.

MECHANICAL ENGINEER:
MECHANICAL ENGINEER, INC.

ELECTRICAL ENGINEER:
ELECTRICAL ENGINEER, INC.

CONSTRUCTION:
CONSTRUCTION, INC.

DATE: 10/1/01

SCALE: 1/8" = 1'-0"

PROJECT NO. 01-01

DATE: 10/1/01

SCALE: 1/8" = 1'-0"

PROJECT NO. 01-01

DATE: 10/1/01

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DATE: 10/1/01

SCALE: 1/8" = 1'-0"

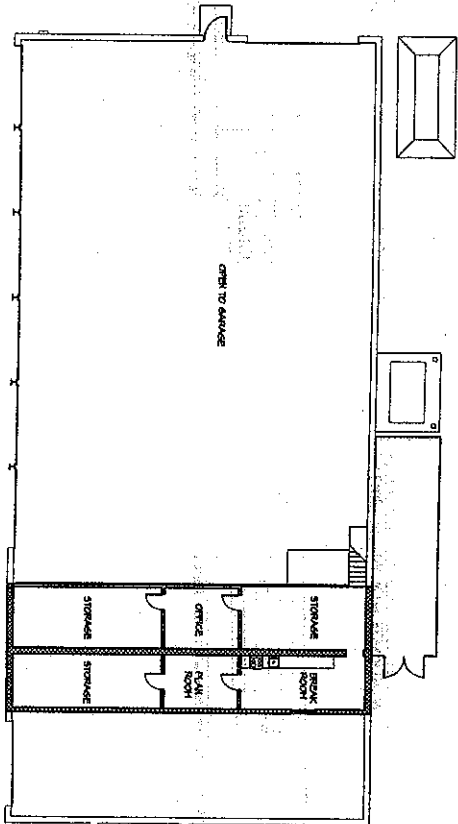
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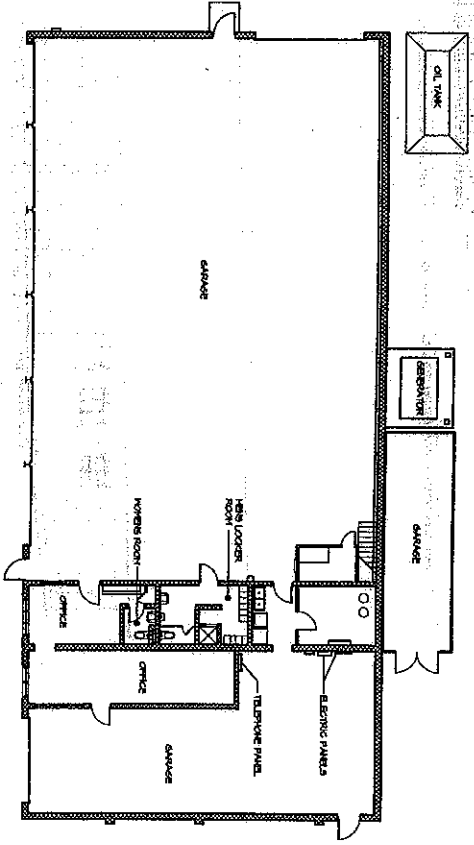
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PROJECT NO. 01-01

① EXISTING MEZZANINE LEVEL FLOOR PLAN
SCALE: 1/8" = 1'-0"



② EXISTING GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



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NOT FOR CONSTRUCTION

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**TOWN OF
LUNENBURG**
DPW / ADULTS /
RENOVATIONS

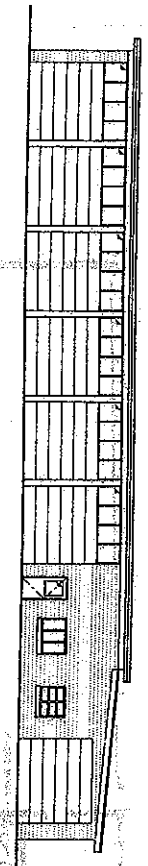
WORK
TOWN OF LUNENBURG, MA
LUNENBURG, MA 01545

ARCHITECT
HERBIE KARR
ARCHITECT, INC.
31 North Street, Suite 100
Lunenburg, MA 01545

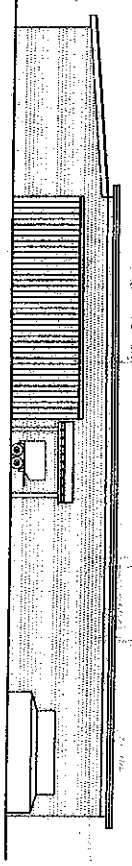
OWN, ENGINEER
PAUL R. RYAN CONSULTANTS, INC.
100 North Street, Suite 100
Lunenburg, MA 01545
STRUCTURAL ENGINEER
JOHN RYAN & ASSOCIATES, INC.
100 North Street, Suite 100
Lunenburg, MA 01545
MECHANICAL ENGINEER
JOHN RYAN & ASSOCIATES, INC.
100 North Street, Suite 100
Lunenburg, MA 01545
ELECTRICAL ENGINEER
JOHN RYAN & ASSOCIATES, INC.
100 North Street, Suite 100
Lunenburg, MA 01545

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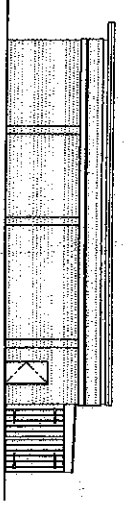
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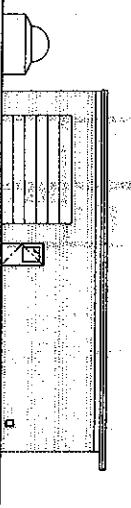
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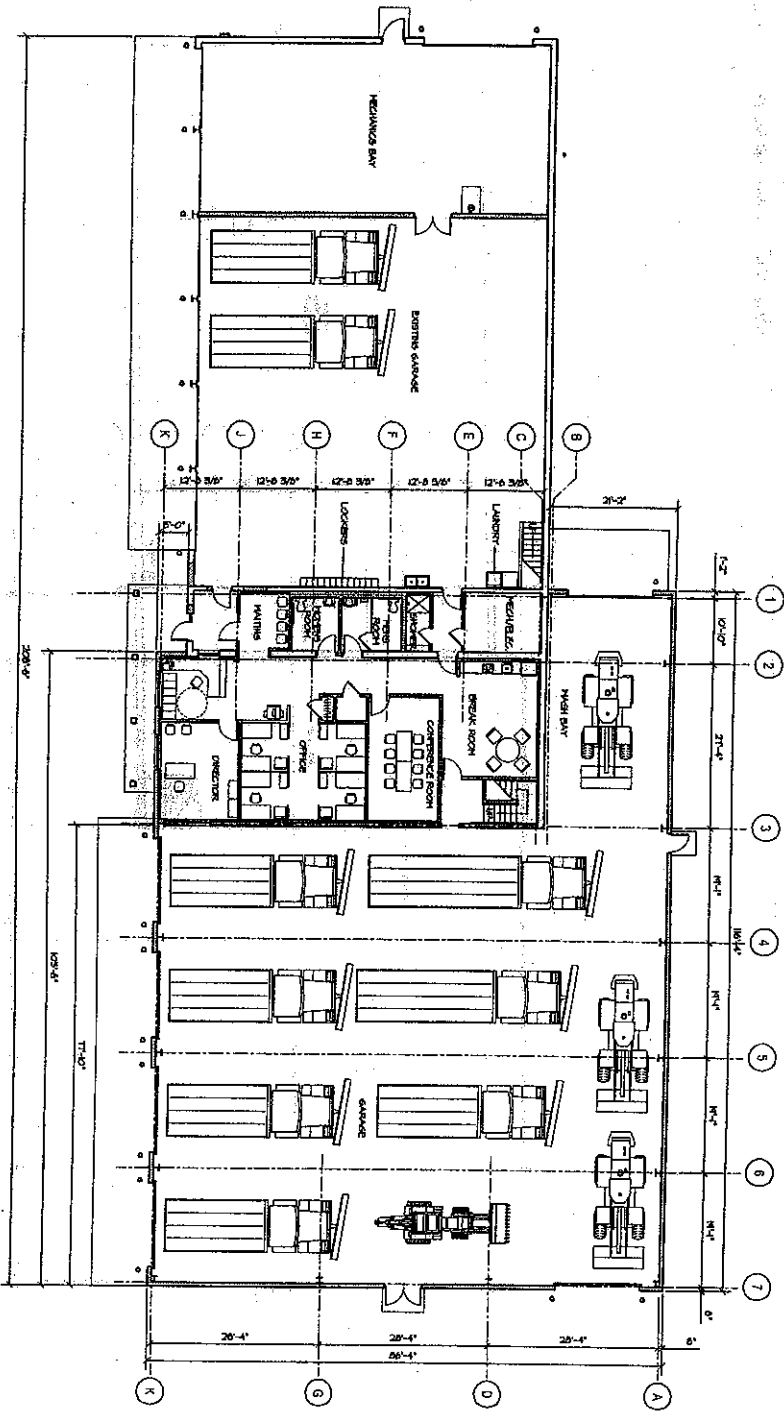


TOWN OF
LUNENBURG
DWY ADDITION /
RENOVATIONS

OWNER:
TOWN OF LUNENBURG, VA
200 MARKET STREET
LUNENBURG, VA 22080

ARCHITECT:
HELEN KABL
ARCHITECTS, INC.
401 MARKET STREET, SUITE 200
LUNENBURG, VA 22080

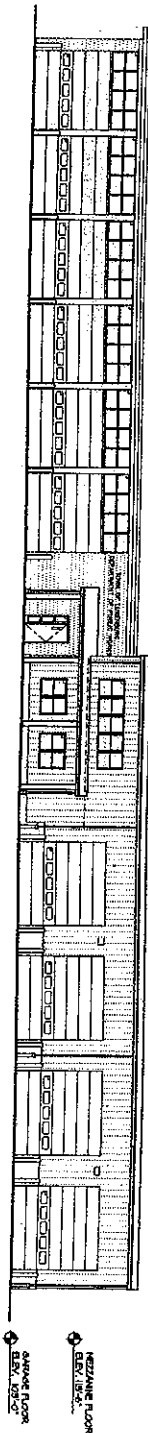
GENERAL CONTRACTOR:
ALLEN & CO. CONSTRUCTION, INC.
1000 MARKET STREET, SUITE 200
LUNENBURG, VA 22080
MECHANICAL CONTRACTOR:
J. M. ASSOCIATES, INC.
1000 MARKET STREET, SUITE 200
LUNENBURG, VA 22080
ELECTRICAL CONTRACTOR:
J. M. ASSOCIATES, INC.
1000 MARKET STREET, SUITE 200
LUNENBURG, VA 22080



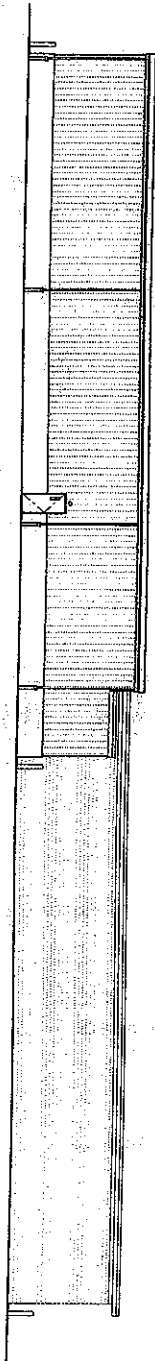
PROPOSED GROUND FLOOR PLAN
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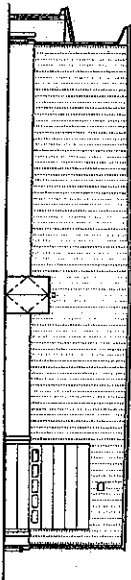
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94. 100007-100008-094	
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97. 100007-100008-097	
98. 100007-100008-098	
99. 100007-100008-099	
100. 100007-100008-100	



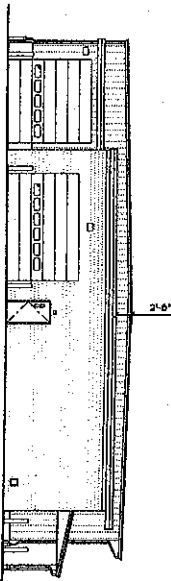
① PROPOSED WEST ELEVATION
SCALE 1/8"=1'-0"



② PROPOSED EAST ELEVATION
SCALE 1/8"=1'-0"



③ PROPOSED SOUTH ELEVATION
SCALE 1/8"=1'-0"



④ PROPOSED NORTH ELEVATION
SCALE 1/8"=1'-0"

PROCESS SET
NOT FOR CONSTRUCTION



TOWN OF
LUNENBURG
DPW ADDITION /
RENOVATIONS

OWNER
TOWN OF LUNENBURG, MA
LUNENBURG, MA 01462

ARCHITECT
HELENE KARL
PROJECTS, INC.

DATE: 08/11/2015
PROJECT: DPW ADDITION / RENOVATIONS
DRAWN BY: J. KARL
CHECKED BY: J. KARL
APPROVED BY: J. KARL
SCALE: 1/8"=1'-0"

NO.	DATE	DESCRIPTION
1	08/11/2015	INITIAL SET
2	08/11/2015	REVISIONS
3	08/11/2015	REVISIONS
4	08/11/2015	REVISIONS
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6	08/11/2015	REVISIONS
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98	08/11/2015	REVISIONS
99	08/11/2015	REVISIONS
100	08/11/2015	REVISIONS



**TOWN OF
LUNENBURG**

DPW ADDITION /
RENOVATIONS

OWNER:
TOWN OF LUNENBURG, VA
200 WATER ST.
LUNENBURG, VA 22972

ARCHITECT:

HELENE KARL

ARCHITECTS, INC.

10100 W. BROAD ST., SUITE 100

CITY, VIRGINIA

20000 W. BROAD ST., SUITE 100

ARLINGTON, VA 22204

STRUCTURAL ENGINEER:

10100 W. BROAD ST., SUITE 100

ARLINGTON, VA 22204

GEOTECHNICAL ENGINEER:

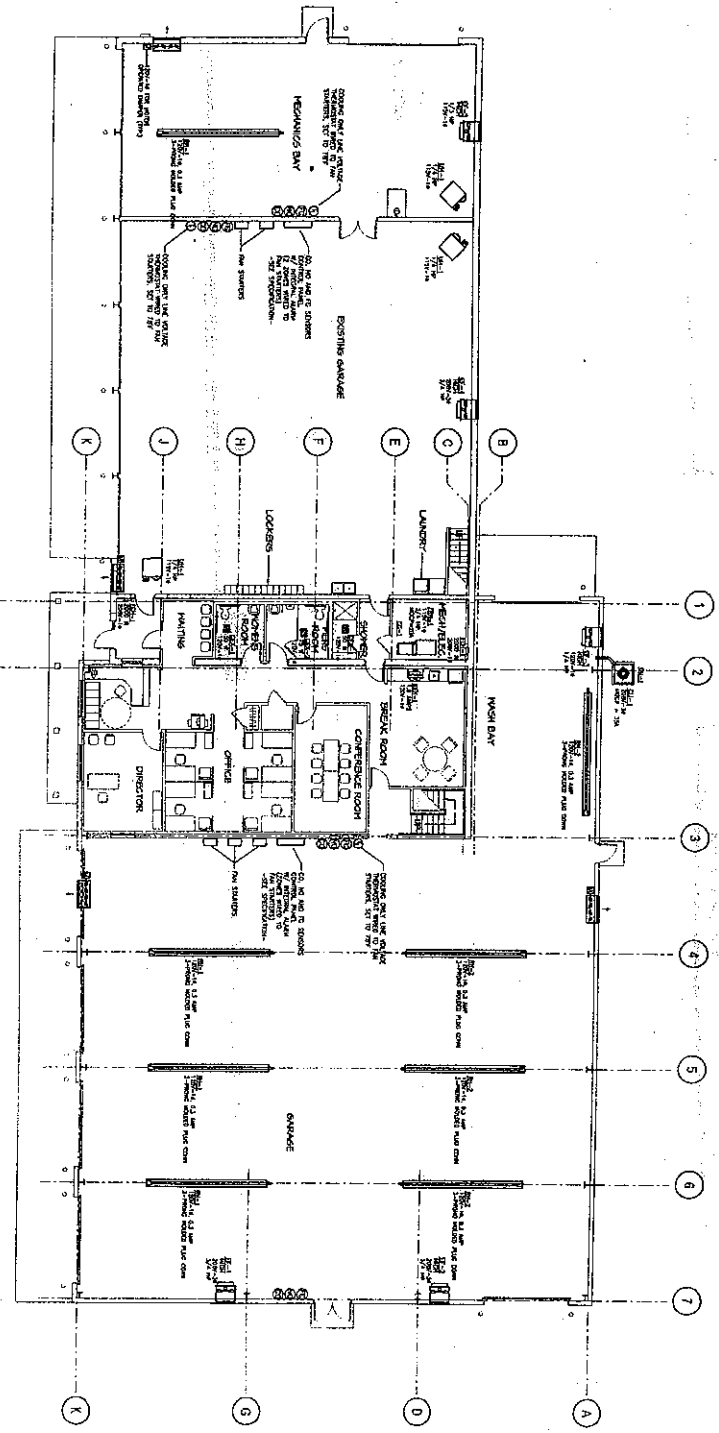
10100 W. BROAD ST., SUITE 100

ARLINGTON, VA 22204

CONSTRUCTION MANAGER:

10100 W. BROAD ST., SUITE 100

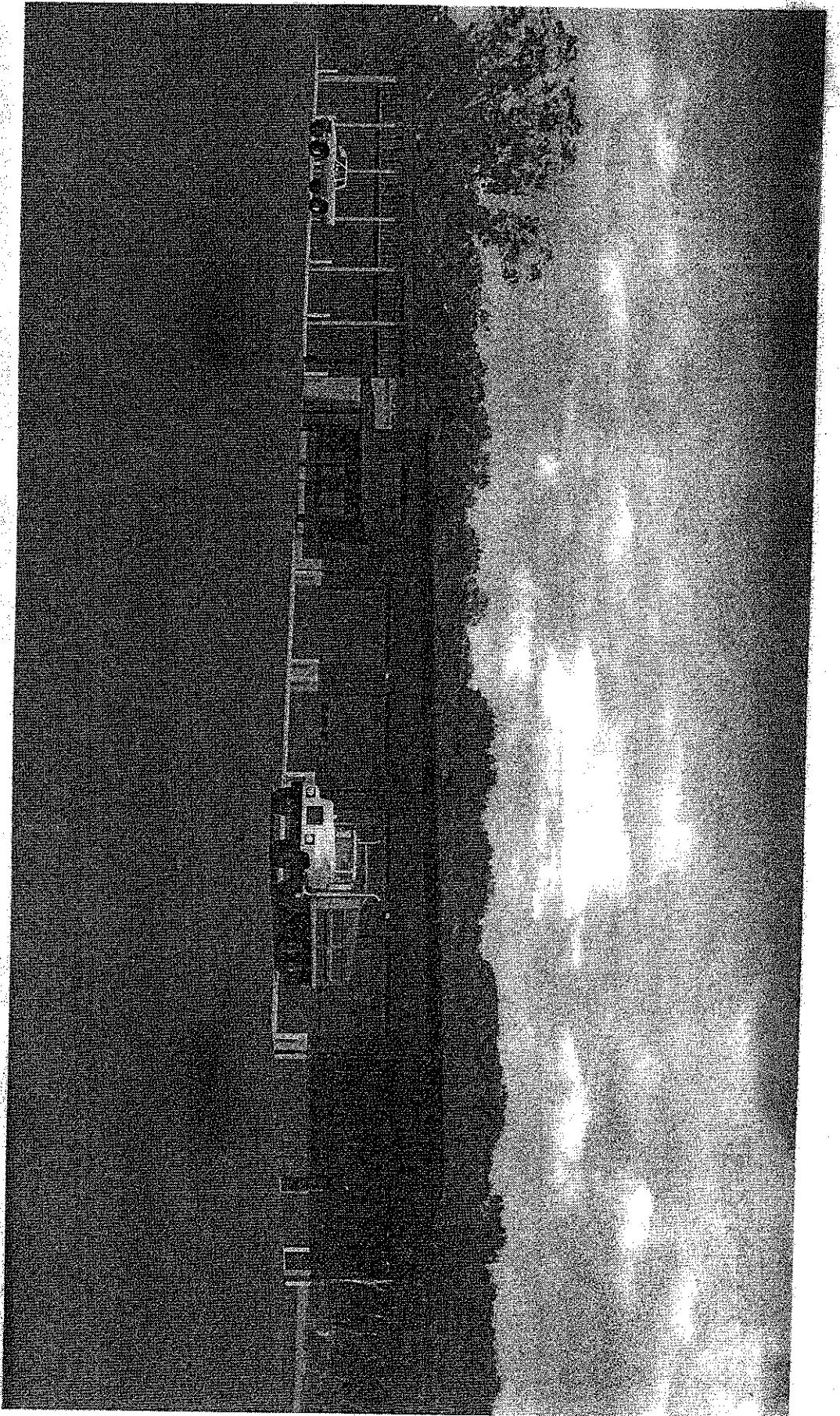
ARLINGTON, VA 22204



3 PROPOSED GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"

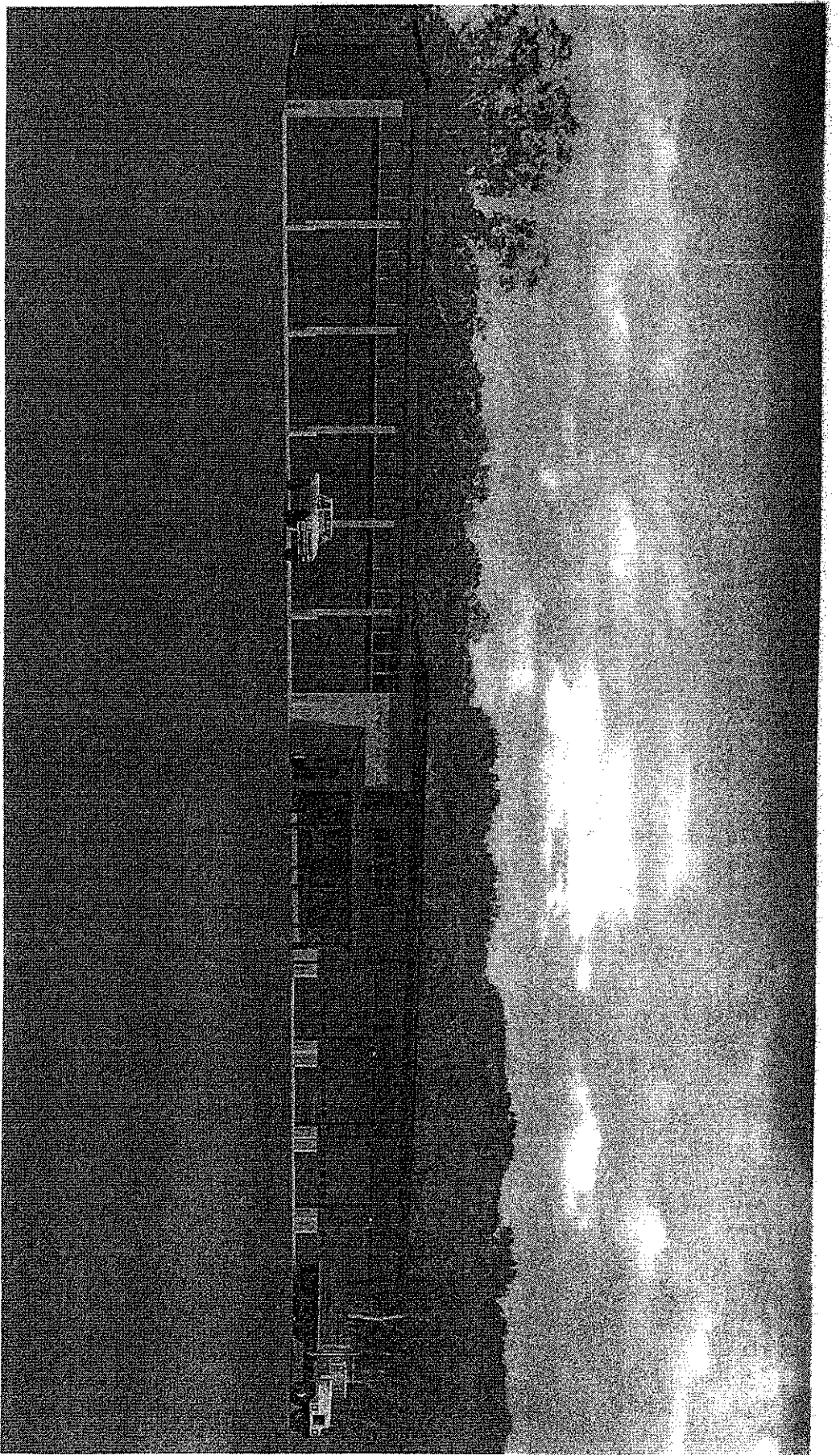
PROGRESS SET
NOT FOR CONSTRUCTION

REVISIONS	
NO.	DESCRIPTION
1	ISSUED FOR PERMIT
2	ISSUED FOR PERMIT
3	ISSUED FOR PERMIT
4	ISSUED FOR PERMIT
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7	ISSUED FOR PERMIT
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18	ISSUED FOR PERMIT
19	ISSUED FOR PERMIT
20	ISSUED FOR PERMIT



DPW Renovations
Rendering Image 1

 **HELENE • KARL**
Architects, Inc.



DPW Renovations
Rendering Image 2

 **HELENE • KARL**
Architects, Inc.

CONCEPTUAL CONSTRUCTION COST ESTIMATE

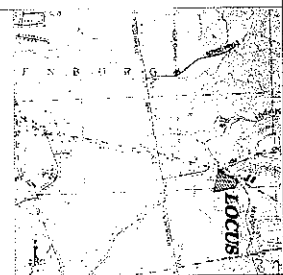
ITEM	UNIT	QUAN.	MATERIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 1 - General										
Supervision/General Conditions	WK	20		\$0	40.00	800	\$60.00	\$48,000		\$48,000
Project Management	WK	20	\$75.00	\$1,500	8.00	160	\$65.00	\$10,400		\$11,900
Temporary Facilities (1 trailer)	WK	20	\$400.00	\$8,000					\$1,500	\$9,500
Protection	WK	20	\$25.00	\$500	8.00	160	\$51.59	\$8,254	\$2,500	\$11,254
Demolition - General	LS	1	\$1,000.00	\$1,000	64.00	64	\$51.59	\$3,302	\$10,000	\$14,302
Dumpsters	EA	6	\$625.00	\$3,750	0.00	0	\$0.00	\$0		\$3,750
Material Handling/Equipment	WK	20	\$150.00	\$3,000	8.00	160	\$51.59	\$8,254		\$11,254
Clean-up	WK	20	\$25.00	\$500	8.00	160	\$51.59	\$8,254		\$8,754
Project Closeout	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$1,500	\$1,500
									Subtotal	\$120,215
DIVISION 2 - Site Work										
Hay Bale/Silt Fence	LF	500	\$3.00	\$1,500	0.05	25	\$51.59	\$1,290		\$2,790
Demolition/Excavation	CY	650	\$0.00	\$0	0.25	163	\$82.12	\$13,345	\$2,500	\$15,845
Septic System- Basic	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$30,000	\$30,000
Septic System - Pump Chamber	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$20,000	\$20,000
Oil Water Separator Tank	EA	1	\$5,500.00	\$5,500	48.00	48	\$82.12	\$3,942	\$2,500	\$11,942
2" Water Service Pipe	LF	100	\$4.25	\$425	0.30	30	\$71.41	\$2,142		\$2,567
Backfill	CY	300	\$4.65	\$1,395	0.25	75	\$82.12	\$6,159	\$1,500	\$9,054
Gravel	TON	300	\$9.00	\$2,700	0.10	30	\$82.12	\$2,464	\$1,200	\$6,364
Loam and Seed	SF	0	\$0.50	\$0	0.01	0	\$47.45	\$0		\$0
Miscellaneous (signs, etc.)	LS	1	\$500.00	\$500	16.00	16	\$67.56	\$1,081		\$1,581
									Subtotal	\$100,142
DIVISION 3 - Concrete										
Concrete - Foundations	CY	125	\$100.00	\$12,500	1.00	125	\$81.93	\$10,241		\$22,741
Concrete - Slabs	CY	225	\$100.00	\$22,500	1.50	338	\$81.93	\$27,651		\$50,151
Concrete Formwork	SF	5100	\$0.95	\$4,845	0.08	408	\$81.93	\$33,427		\$38,272
Reinforcement and Wire	TON	11	\$1,000.00	\$11,000	16.00	176	\$81.93	\$14,420		\$25,420
Miscellaneous	LS	1	\$1,200.00	\$1,200	120.00	120	\$81.93	\$9,832		\$11,032
									Subtotal	\$147,616
DIVISION 4 - Masonry										
CMU Interior Walls	SF	1000	\$3.50	\$3,500	0.25	250	\$94.69	\$23,673		\$27,173
Miscellaneous	LS	1	\$500.00	\$500	24.00	24	\$94.69	\$2,273		\$2,773
									Subtotal	\$29,945
DIVISION 5 - Metals										
Bollards	EA	20	\$200.00	\$4,000	2.00	40	\$71.24	\$2,850		\$6,850
Roof Seismic Upgrades	EA	30	\$100.00	\$3,000	2.50	75	\$94.69	\$7,102	\$500	\$10,602
Miscellaneous Metal	LS	1	\$600.00	\$600	16.00	16	\$94.69	\$1,515		\$2,115
									Subtotal	\$19,566
DIVISION 6 - Wood and Plastic										
Plywood Back-up	SF	2720	\$1.50	\$4,080	0.03	82	\$71.24	\$5,813		\$9,893
Counters	LF	10	\$65.00	\$650	0.75	8	\$71.24	\$534		\$1,184
Roof Blocking 2X	LF	3500	\$1.00	\$3,500	0.03	88	\$71.24	\$6,234		\$9,734
Miscellaneous - blocking, etc.	LS	1	\$250.00	\$250	16.00	16	\$71.24	\$1,140		\$1,390
									Subtotal	\$22,201
DIVISION 7 - Thermal/Moisture										
Perimeter Insulation	SF	2500	\$1.15	\$2,875	0.03	75	\$71.24	\$5,343		\$8,218
EPDM Roofing	SF	16500	\$6.50	\$107,250	0.02	330	\$83.34	\$27,502		\$134,752
Roof Insulation	SF	16500	\$1.15	\$18,975	0.02	330	\$83.34	\$27,502		\$46,477
Flashing - Edge	LF	800	\$8.00	\$6,400	0.10	80	\$83.34	\$6,667		\$13,067
Vapor Barrier	SF	10000	\$0.05	\$500	0.01	50	\$62.10	\$3,105		\$3,605
Firestopping	LS	1	\$150.00	\$150	12.00	12	\$62.10	\$745		\$895
Sealant and Caulk	LS	1	\$80.00	\$80	24.00	24	\$62.10	\$1,490		\$1,570
									Subtotal	\$208,585

CONCEPTUAL CONSTRUCTION COST ESTIMATE

ITEM	UNIT	QUAN.	MATE RIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 8 - Doors/Windows										
Metal Door with Vision Panel	EA	8	\$325.00	\$2,600	4.00	32	\$71.24	\$2,280		\$4,880
Interior Wood Doors	EA	10	\$235.00	\$2,350	2.00	20	\$71.24	\$1,425		\$3,775
Pass Window	EA	2	\$400.00	\$800	4.00	8	\$71.24	\$570		\$1,370
Metal Frames	EA	17	\$195.00	\$3,315	2.00	34	\$71.24	\$2,422		\$5,737
Windows - Addition	EA	9	\$375.00	\$3,375	3.00	27	\$71.24	\$1,923		\$5,298
Windows - Existing	EA	24	\$375.00	\$9,000	4.00	96	\$71.24	\$6,839		\$15,839
Overhead Doors w/ Motors	EA	12	\$4,800.00	\$57,600	16.00	192	\$71.24	\$13,678		\$71,278
Finish Hardware	EA	17	\$450.00	\$7,650	3.00	51	\$71.24	\$3,633		\$11,283
									Subtotal	\$119,460
DIVISION 9 - Finishes										
Painting - Interior	SF	14000	\$0.25	\$3,500	0.02	280	\$79.29	\$22,201		\$25,701
VCT Floor	SF	4000	\$1.95	\$7,800	0.20	800	\$90.63	\$72,504		\$80,304
Vinyl Base	LF	600	\$1.00	\$600	0.03	18	\$90.63	\$1,631		\$2,231
Gypsum and Framing	SF	7000	\$3.95	\$27,650	0.04	245	\$85.46	\$20,938		\$48,588
Acoustical Ceilings	SF	3700	\$2.00	\$7,400	0.02	81	\$85.46	\$6,956		\$14,356
Ceramic Tile	SF	650	\$4.25	\$2,763	0.11	72	\$90.77	\$6,490		\$9,253
Miscellaneous Painting - exterior	SF	4000	\$0.30	\$1,200	0.03	120	\$79.29	\$9,515	\$1,000	\$11,715
									Subtotal	\$192,148
DIVISION 10 - Specialties										
Logo Signage	EA	1	\$1,500.00	\$1,500	8.00	8	\$64.48	\$516	\$500	\$2,516
Fire Extinguisher	EA	5	\$125.00	\$625	1.00	5	\$64.48	\$322		\$947
Appliances	EA	2	\$475.00	\$950	2.00	1	\$64.48	\$64		\$1,014
Lockers / Bench	EA	12	\$200.00	\$2,400	1.50	18	\$81.93	\$1,475		\$3,875
Toilet Partitions	EA	1	\$850.00	\$850	4.00	4	\$71.24	\$285		\$1,135
Bathroom Accessories	EA	3	\$275.00	\$825	4.00	12	\$71.24	\$855		\$1,680
									Subtotal	\$11,167
DIVISION 11 - 12 Equipment and Furnishings										
NOT USED										
DIVISION 13 - Special Construction										
Pre-Engineered Building	LS	1	\$145,000.00	\$145,000	0.00	0	\$0.00	\$0		\$145,000
Building Erection	LS	1	\$145,000.00	\$145,000	0.00	0	\$0.00	\$0		\$145,000
Entry Canopy	LS	1	\$7,500.00	\$7,500	0.00	0	\$0.00	\$0		\$7,500
									Subtotal	\$297,500
DIVISION 14 - Conveying Systems										
NOT USED										
DIVISION 15 - Plumbing										
Water Closet (toilet)	EA	2	\$553.00	\$1,106	4.00	8	\$105.96	\$848		\$1,954
Water Closet Rough-In	EA	2	\$185.00	\$370	8.00	16	\$105.96	\$1,695		\$2,065
Lavatory and Faucet-Wall	EA	3	\$375.00	\$1,125	4.00	12	\$105.96	\$1,272		\$2,397
Lavatory Rough-In	EA	3	\$147.00	\$441	8.00	24	\$105.96	\$2,543		\$2,984
Urinal	EA	1	\$195.00	\$195	2.00	2	\$105.96	\$212		\$407
Urinal Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Janitors Sink	EA	1	\$125.00	\$125	2.00	2	\$105.96	\$212		\$337
Janitors Sink Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Shower and Faucet-Wall	EA	1	\$795.00	\$795	4.00	4	\$105.96	\$424		\$1,219
Shower Rough-In	EA	1	\$200.00	\$200	10.00	10	\$105.96	\$1,060		\$1,260
1/2" Type "L" Copper & Insul.	LF	200	\$2.10	\$420	0.20	40	\$105.96	\$4,238		\$4,658
3/4" Type "L" Copper & Insul.	LF	300	\$2.75	\$825	0.20	60	\$105.96	\$6,358		\$7,183
1" Type "L" Copper & Insul.	LF	20	\$3.48	\$70	0.40	8	\$105.96	\$848		\$917
1 1/4" Type "L" Copper & Insul.	LF	10	\$4.22	\$42	0.80	8	\$105.96	\$848		\$890
1 1/2" Type "L" Copper & Insul.	LF	10	\$5.11	\$51	0.80	8	\$105.96	\$848		\$899
2" Type "L" Copper & Insul.	LF	20	\$7.20	\$144	0.40	8	\$105.96	\$848		\$992
Emergency Eye Wash	EA	1	\$550.00	\$550	12.00	12	\$105.96	\$1,272		\$1,822
Hose Bibs	EA	5	\$50.00	\$250	1.00	5	\$105.96	\$530		\$780
Hose Bib Rough-In	EA	5	\$65.00	\$325	2.00	10	\$105.96	\$1,060		\$1,385
Water Fountain	EA	1	\$350.00	\$350	8.00	8	\$105.96	\$848		\$1,198
Miscellaneous Valves	EA	50	\$20.00	\$1,000	0.32	16	\$105.96	\$1,695		\$2,695
Backflow Preventer	EA	1	\$1,000.00	\$1,000	8.00	8	\$105.96	\$848		\$1,848
Sanitary & Vent Piping	LF	400	\$10.63	\$4,252	0.10	40	\$105.96	\$4,238		\$8,490
Wash Bay Equipment	EA	1	\$12,000.00	\$12,000	80.00	80	\$105.96	\$8,477		\$20,477
Water Heater	EA	1	\$1,500.00	\$1,500	32.00	32	\$105.96	\$3,391		\$4,891
Floor Drains (Trench)	LF	50	\$50.00	\$2,500	1.00	50	\$105.96	\$5,298		\$7,798
Compressed Air	LS	1	\$0.00	\$0	0.00	0	\$105.96	\$0	\$5,500	\$5,500
Miscellaneous	LS	1	\$300.00	\$300	8.00	8	\$88.61	\$709		\$1,009
									Subtotal	\$87,030

CONCEPTUAL CONSTRUCTION COST ESTIMATE

ITEM	UNIT	QUAN.	MATERIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 15 - Fire Protection										
NOT USED										
DIVISION 15 - Mechanical										
Unit Heaters - Materials	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$12,000	\$12,000
Unit Heaters - Labor	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$4,500	\$4,500
Ductwork	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$16,000	\$16,000
Louvers	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$25,000	\$25,000
CO Detection System	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$17,000	\$17,000
Furnace, Cooling, Condensing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$22,000	\$22,000
Garage Exhaust Fans	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$8,000	\$8,000
Radiant Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$8,000	\$8,000
Recessed Cabinet Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Air Balancing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Miscellaneous	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$5,000	\$5,000
									Subtotal	\$121,500
DIVISION 16 - Electrical										
Service	LS	1	\$5,500.00	\$5,500	48.00	48	\$104.42	\$5,012		\$10,512
Connections to Mechanical	EA	18	\$150.00	\$2,700	2.00	36	\$104.42	\$3,759		\$6,459
Fire Alarm System	LS	1	\$5,500.00	\$5,500	120.00	120	\$104.42	\$12,530		\$18,030
Light Fixtures	EA	60	\$250.00	\$15,000	2.50	150	\$104.42	\$15,663		\$30,663
Receptacles	EA	50	\$75.00	\$3,750	4.00	200	\$104.42	\$20,884		\$24,634
Tele/Data Empty Conduit	LS	1	\$1,000.00	\$1,000	40.00	40	\$104.42	\$4,177		\$5,177
Tele/Data wiring & Equipment								\$15,000		\$15,000
Emergency Generator Hook-up	EA	1	\$0.00	\$0	0.00	0	\$104.42	\$0	\$6,000	\$6,000
Testing	LS	1	\$0.00	\$0	80.00	80	\$104.42	\$8,354		\$8,354
Commissioning	LS	1	\$0.00	\$0	40.00	40	\$104.42	\$4,177		\$4,177
									Subtotal	\$129,006
GRAND SUBTOTAL										\$1,606,082
OVERHEAD (10%)										\$160,608
SUBTOTAL										\$1,766,690
PROFIT (3%)										\$53,001
Building Permit (\$10/1000)										\$0
Bond (1.2%)										\$21,200
GRAND TOTAL										\$1,840,891



ZONING DISTRICT:
OVERLAY DISTRICT

1. THIS PLAN IS PART OF A SET OF DOCUMENTS SUBMITTED TO THE BOARD OF SUPERVISORS FOR REVIEW AND APPROVAL OF THE PROPOSED ROAD AND TRAIL PROJECT. THE BOARD OF SUPERVISORS SHALL REVIEW THE PROJECT AND MAKE A DETERMINATION AS TO WHETHER THE PROJECT IS IN THE PUBLIC INTEREST AND WHETHER THE PROJECT IS IN ACCORDANCE WITH THE ZONING ORDINANCES AND THE SUBDIVISION MAP ACT.

2. THE BOARD OF SUPERVISORS SHALL REVIEW THE PROJECT AND MAKE A DETERMINATION AS TO WHETHER THE PROJECT IS IN THE PUBLIC INTEREST AND WHETHER THE PROJECT IS IN ACCORDANCE WITH THE ZONING ORDINANCES AND THE SUBDIVISION MAP ACT.

3. THE BOARD OF SUPERVISORS SHALL REVIEW THE PROJECT AND MAKE A DETERMINATION AS TO WHETHER THE PROJECT IS IN THE PUBLIC INTEREST AND WHETHER THE PROJECT IS IN ACCORDANCE WITH THE ZONING ORDINANCES AND THE SUBDIVISION MAP ACT.

4. THE BOARD OF SUPERVISORS SHALL REVIEW THE PROJECT AND MAKE A DETERMINATION AS TO WHETHER THE PROJECT IS IN THE PUBLIC INTEREST AND WHETHER THE PROJECT IS IN ACCORDANCE WITH THE ZONING ORDINANCES AND THE SUBDIVISION MAP ACT.

5. THE BOARD OF SUPERVISORS SHALL REVIEW THE PROJECT AND MAKE A DETERMINATION AS TO WHETHER THE PROJECT IS IN THE PUBLIC INTEREST AND WHETHER THE PROJECT IS IN ACCORDANCE WITH THE ZONING ORDINANCES AND THE SUBDIVISION MAP ACT.

LOCUS
TOWN
PROPOSED MAP

SCALE: 1" = 40' DATE: NOVEMBER 2010

PROJECT NO. PLAN NO.



**TOWN OF
LUNENBURG**
DPW ADDITION /
RENOVATIONS

OWNER:
TOWN OF LUNENBURG, VA
LUNENBURG, VA 22182

ARCHITECT

HELENE + KARL
ARCHITECT, LLC
11 Sykes Drive, Dayton VA 22150

CIVIL ENGINEER

PAUL J. BERRY, LICENSED PROFESSIONAL ENGINEER
NO. 15000, STATE OF VIRGINIA
ROCKFORD, VA 22150-1822

STRUCTURAL ENGINEER

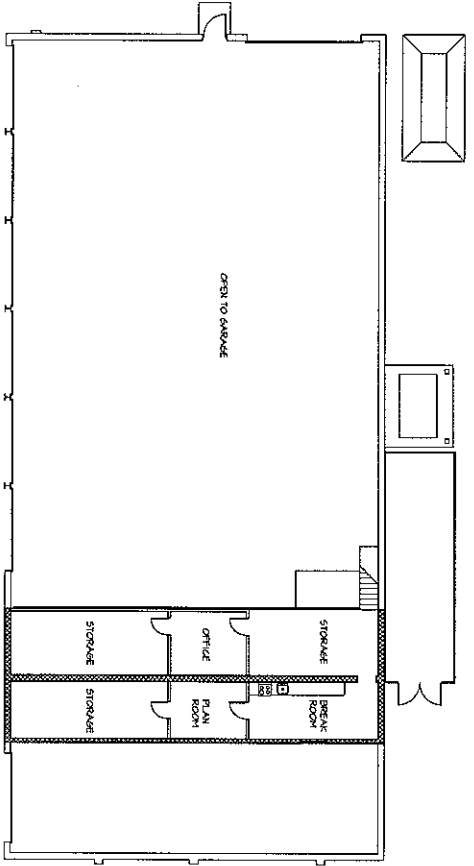
JAY ASSOCIATES, INC.
2000 W. BROADWAY, SUITE 100
BROOKFIELD, VA 22133

METHEANICAL ENGINEER

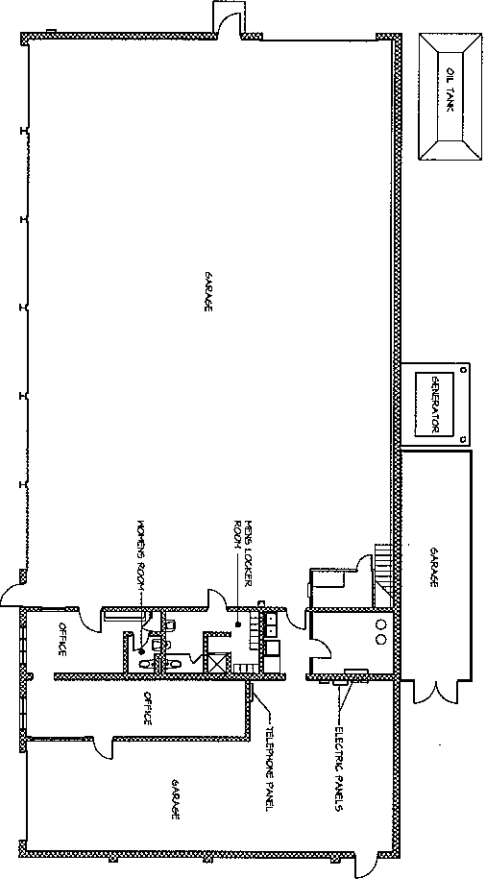
STANLEY DORSEY & COMPANY
1000 W. BROADWAY, SUITE 100
ARLINGTON, VA 22133

ELECTRICAL ENGINEER

JOHN J. HARRIS, JR., LICENSED PROFESSIONAL ENGINEER
NO. 15000, STATE OF VIRGINIA
ROCKFORD, VA 22150



① EXISTING MEZZANINE LEVEL FLOOR PLAN
SCALE: 1/8"=1'-0" 1"=12'-0"



② EXISTING GROUND FLOOR PLAN
SCALE: 1/8"=1'-0" 1"=12'-0"

PROGRESS SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	1/10/21	PROJECT START
2	1/10/21	PROJECT START
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100	1/10/21	PROJECT START



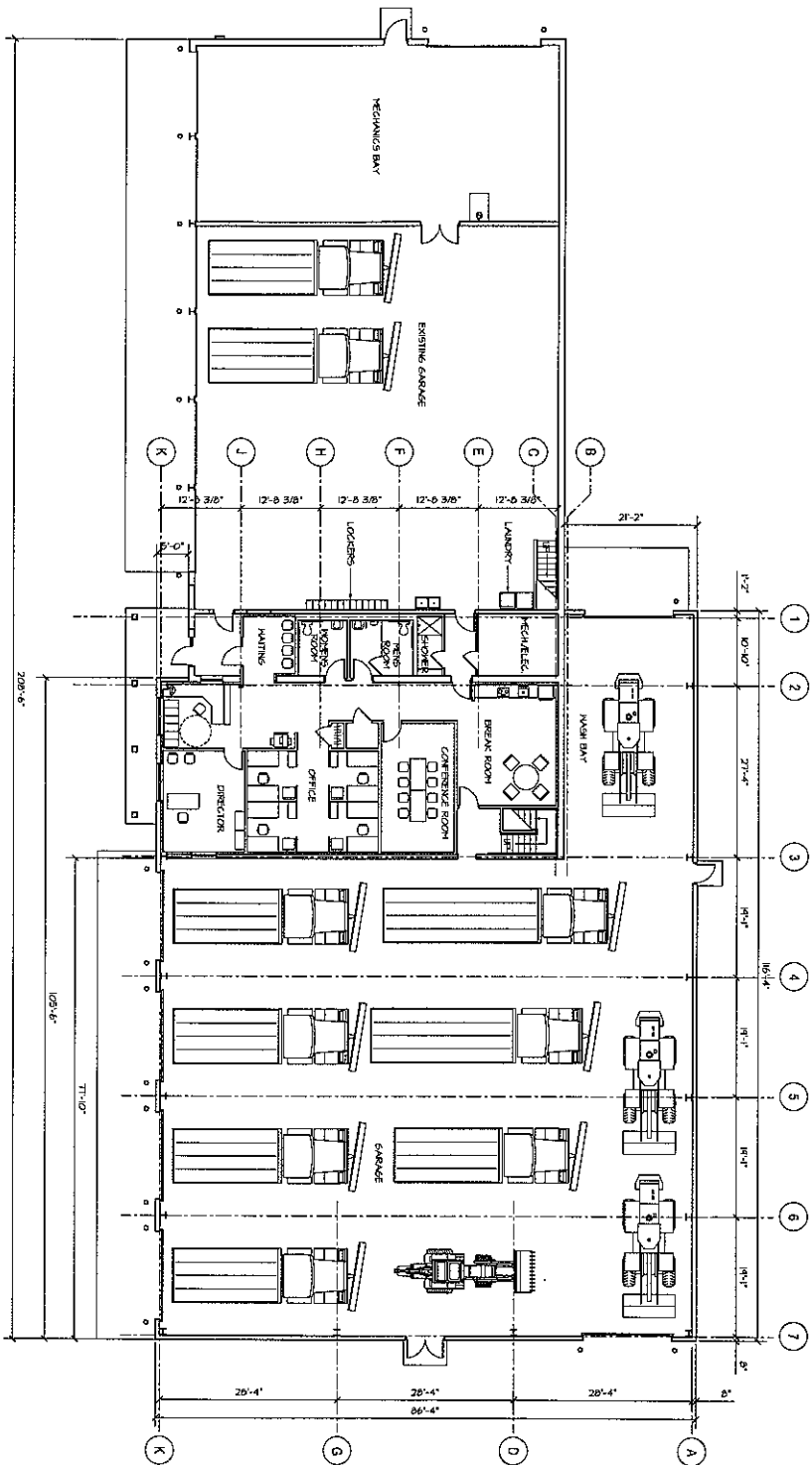
**TOWN OF
LUNENBURG**
DPW ADDITION /
RENOVATIONS

DATE: 10/1/2019
TOWN OF LUNENBURG, VA
100 CHURCH ST. 01442
LUNENBURG, VA 01462

ARCHITECT:
HELENE + KARL
Architects, Inc.
31 South Main Street, Suite 100
Lunenburg, VA 01462

DPW ENGINEER:
BLACK & VEATCH, INC.
10000 W. 16th Avenue, Suite 100
Boulder, CO 80502-3100
STRUCTURAL ENGINEER:
JUN ASSOCIATES, INC.
10000 W. 16th Avenue, Suite 100
Boulder, CO 80502-3100
MECHANICAL ENGINEER:
JUN ASSOCIATES, INC.
10000 W. 16th Avenue, Suite 100
Boulder, CO 80502-3100
ELECTRICAL ENGINEER:
JOHN A. ANDERSON & ASSOCIATES, INC.
10000 W. 16th Avenue, Suite 100
Boulder, CO 80502-3100

Project Name	DPW ADDITION / RENOVATIONS
Project Number	10000
Revision	1
Drawn By	HELENE + KARL
Checked By	HELENE + KARL
Scale	1/8" = 1'-0"
Sheet	A3
Project Location	LUNENBURG, VA
Project Description	DPW ADDITION / RENOVATIONS
Project Status	PROPOSED
Project Date	10/1/2019
Project Owner	TOWN OF LUNENBURG, VA
Project Architect	HELENE + KARL
Project Engineer	BLACK & VEATCH, INC.
Project Structural Engineer	JUN ASSOCIATES, INC.
Project Mechanical Engineer	JUN ASSOCIATES, INC.
Project Electrical Engineer	JOHN A. ANDERSON & ASSOCIATES, INC.



PROPOSED GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"

PROGRESS SET
NOT FOR CONSTRUCTION



TOWN OF
LUNENBURG
DPW ADDITION /
RENOVATIONS

OWNER:
TOWN OF LUNENBURG, VA
200 N. MAIN ST.
LUNENBURG, VA 01462

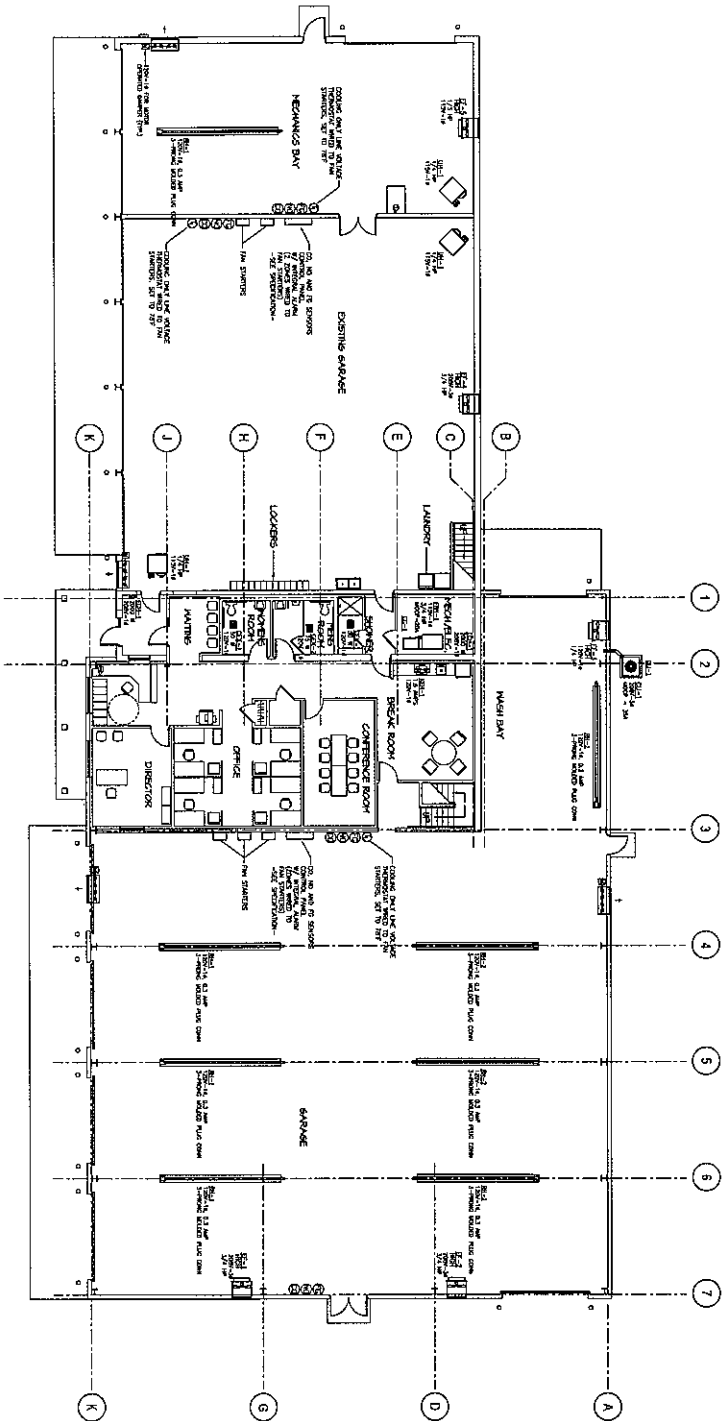
ARCHITECT:
HEINER-KARL
ARCHITECT, INC.
1100 PARK DRIVE, SUITE 100
LUNENBURG, VA 01462

DPW ENGINEER:
ALAN E. TIT, CONSULTANT, INC.
100 N. MAIN ST., SUITE 300
LUNENBURG, VA 01462-3000

STRUCTURAL ENGINEER:
J.M. ASSOCIATES, INC.
100 N. MAIN ST., SUITE 300
LUNENBURG, VA 01462

MECHANICAL ENGINEER:
STANLEY ENGINEERING CORP.
100 N. MAIN ST., SUITE 300
LUNENBURG, VA 01462

ELECTRICAL ENGINEER:
JOHN J. LARSEN, JR. & ASSOCIATES, INC.
100 N. MAIN ST., SUITE 300
LUNENBURG, VA 01462



② PROPOSED GROUND FLOOR PLAN
SCALE 1/8"=1'-0"

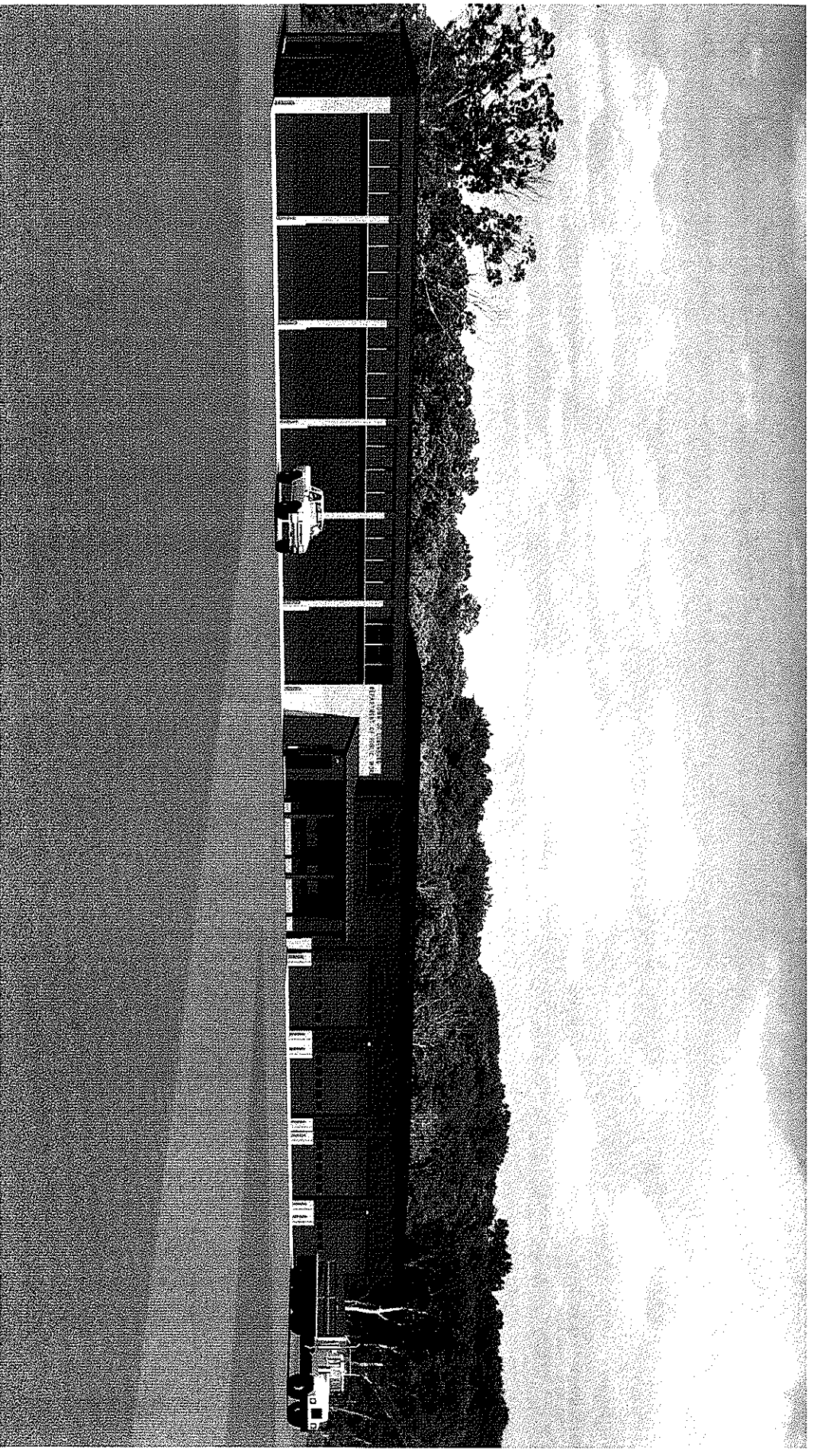
PROCESS SET
NOT FOR CONSTRUCTION



DPW Renovations
Rendering Image 1



HELENE • KARL
Architects, Inc.



DPW Renovations
Rendering Image 2



HELENE • KARL
Architects, Inc.

CONCEPTUAL CONSTRUCTION COST ESTIMATE

ITEM	UNIT	QUAN.	MATE RIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 1 - General										
Supervision/General Conditions	WK	20		\$0	40.00	800	\$60.00	\$48,000		\$48,000
Project Management	WK	20	\$75.00	\$1,500	8.00	160	\$65.00	\$10,400		\$11,900
Temporary Facilities (1 trailer)	WK	20	\$400.00	\$8,000					\$1,500	\$9,500
Protection	WK	20	\$25.00	\$500	8.00	160	\$51.59	\$8,254	\$2,500	\$11,254
Demolition - General	LS	1	\$1,000.00	\$1,000	64.00	64	\$51.59	\$3,302	\$10,000	\$14,302
Dumpsters	EA	6	\$625.00	\$3,750	0.00	0	\$0.00	\$0		\$3,750
Material Handling/Equipment	WK	20	\$150.00	\$3,000	8.00	160	\$51.59	\$8,254		\$11,254
Clean-up	WK	20	\$25.00	\$500	8.00	160	\$51.59	\$8,254		\$8,754
Project Closeout	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$1,500	\$1,500
									Subtotal	\$120,215
DIVISION 2 - Site Work										
Hay Bale/Silt Fence	LF	500	\$3.00	\$1,500	0.05	25	\$51.59	\$1,290		\$2,790
Demolition/Excavation	CY	650	\$0.00	\$0	0.25	163	\$82.12	\$13,345	\$2,500	\$15,845
Septic System- Basic	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$30,000	\$30,000
Septic System - Pump Chamber	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$20,000	\$20,000
Oil Water Separator Tank	EA	1	\$5,500.00	\$5,500	48.00	48	\$82.12	\$3,942	\$2,500	\$11,942
2" Water Service Pipe	LF	100	\$4.25	\$425	0.30	30	\$71.41	\$2,142		\$2,567
Backfill	CY	300	\$4.65	\$1,395	0.25	75	\$82.12	\$6,159	\$1,500	\$9,054
Gravel	TON	300	\$9.00	\$2,700	0.10	30	\$82.12	\$2,464	\$1,200	\$6,364
Loam and Seed	SF	0	\$0.50	\$0	0.01	0	\$47.45	\$0		\$0
Miscellaneous (signs, etc.)	LS	1	\$500.00	\$500	16.00	16	\$67.56	\$1,081		\$1,581
									Subtotal	\$100,142
DIVISION 3 - Concrete										
Concrete - Foundations	CY	125	\$100.00	\$12,500	1.00	125	\$81.93	\$10,241		\$22,741
Concrete - Slabs	CY	225	\$100.00	\$22,500	1.50	338	\$81.93	\$27,651		\$50,151
Concrete Formwork	SF	5100	\$0.95	\$4,845	0.08	408	\$81.93	\$33,427		\$38,272
Reinforcement and Wire	TON	11	\$1,000.00	\$11,000	16.00	176	\$81.93	\$14,420		\$25,420
Miscellaneous	LS	1	\$1,200.00	\$1,200	120.00	120	\$81.93	\$9,832		\$11,032
									Subtotal	\$147,616
DIVISION 4 - Masonry										
CMU Interior Walls	SF	1000	\$3.50	\$3,500	0.25	250	\$94.69	\$23,673		\$27,173
Miscellaneous	LS	1	\$500.00	\$500	24.00	24	\$94.69	\$2,273		\$2,773
									Subtotal	\$29,945
DIVISION 5 - Metals										
Bollards	EA	20	\$200.00	\$4,000	2.00	40	\$71.24	\$2,850		\$6,850
Roof Seismic Upgrades	EA	30	\$100.00	\$3,000	2.50	75	\$94.69	\$7,102	\$500	\$10,602
Miscellaneous Metal	LS	1	\$600.00	\$600	16.00	16	\$94.69	\$1,515		\$2,115
									Subtotal	\$19,566
DIVISION 6 - Wood and Plastic										
Plywood Back-up	SF	2720	\$1.50	\$4,080	0.03	82	\$71.24	\$5,813		\$9,893
Counters	LF	10	\$65.00	\$650	0.75	8	\$71.24	\$534		\$1,184
Roof Blocking 2X	LF	3500	\$1.00	\$3,500	0.03	88	\$71.24	\$6,234		\$9,734
Miscellaneous - blocking, etc.	LS	1	\$250.00	\$250	16.00	16	\$71.24	\$1,140		\$1,390
									Subtotal	\$22,201
DIVISION 7 - Thermal/Moisture										
Perimeter Insulation	SF	2500	\$1.15	\$2,875	0.03	75	\$71.24	\$5,343		\$8,218
EPDM Roofing	SF	16500	\$6.50	\$107,250	0.02	330	\$83.34	\$27,502		\$134,752
Roof Insulation	SF	16500	\$1.15	\$18,975	0.02	330	\$83.34	\$27,502		\$46,477
Flashing - Edge	LF	800	\$8.00	\$6,400	0.10	80	\$83.34	\$6,667		\$13,067
Vapor Barrier	SF	10000	\$0.05	\$500	0.01	50	\$62.10	\$3,105		\$3,605
Firestopping	LS	1	\$150.00	\$150	12.00	12	\$62.10	\$745		\$895
Sealant and Caulk	LS	1	\$80.00	\$80	24.00	24	\$62.10	\$1,490		\$1,570
									Subtotal	\$208,585

New Roof?

CONCEPTUAL CONSTRUCTION COST ESTIMATE

ITEM	UNIT	QUAN.	MATE RIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 8 - Doors/Windows										
Metal Door with Vision Panel	EA	8	\$325.00	\$2,600	4.00	32	\$71.24	\$2,280		\$4,880
Interior Wood Doors	EA	10	\$235.00	\$2,350	2.00	20	\$71.24	\$1,425		\$3,775
Pass Window	EA	2	\$400.00	\$800	4.00	8	\$71.24	\$570		\$1,370
Metal Frames	EA	17	\$195.00	\$3,315	2.00	34	\$71.24	\$2,422		\$5,737
Windows - Addition	EA	9	\$375.00	\$3,375	3.00	27	\$71.24	\$1,923		\$5,298
Windows - Existing	EA	24	\$375.00	\$9,000	4.00	96	\$71.24	\$6,839		\$15,839
Overhead Doors w/ Motors	EA	12	\$4,800.00	\$57,600	16.00	192	\$71.24	\$13,678		\$71,278
Finish Hardware	EA	17	\$450.00	\$7,650	3.00	51	\$71.24	\$3,633		\$11,283
									Subtotal	\$119,460
DIVISION 9 - Finishes										
Painting - Interior	SF	14000	\$0.25	\$3,500	0.02	280	\$79.29	\$22,201		\$25,701
VCT Floor	SF	4000	\$1.95	\$7,800	0.20	800	\$90.63	\$72,504		\$80,304
Vinyl Base	LF	600	\$1.00	\$600	0.03	18	\$90.63	\$1,631		\$2,231
Gypsum and Framing	SF	7000	\$3.95	\$27,650	0.04	245	\$85.46	\$20,938		\$48,588
Acoustical Ceilings	SF	3700	\$2.00	\$7,400	0.02	81	\$85.46	\$6,956		\$14,356
Ceramic Tile	SF	650	\$4.25	\$2,763	0.11	72	\$90.77	\$6,490		\$9,253
Miscellaneous Painting - exterior	SF	4000	\$0.30	\$1,200	0.03	120	\$79.29	\$9,515	\$1,000	\$11,715
									Subtotal	\$192,148
DIVISION 10 - Specialties										
Logo Signage	EA	1	\$1,500.00	\$1,500	8.00	8	\$64.48	\$516	\$500	\$2,516 -
Fire Extinguisher	EA	5	\$125.00	\$625	1.00	5	\$64.48	\$322		\$947
Appliances	EA	2	\$475.00	\$950	2.00	1	\$64.48	\$64		\$1,014
Lockers / Bench	EA	12	\$200.00	\$2,400	1.50	18	\$81.93	\$1,475		\$3,875
Toilet Partitions	EA	1	\$850.00	\$850	4.00	4	\$71.24	\$285		\$1,135
Bathroom Accessories	EA	3	\$275.00	\$825	4.00	12	\$71.24	\$855		\$1,680
									Subtotal	\$11,167
DIVISION 11 - 12 Equipment and Furnishings										
NOT USED										
DIVISION 13 - Special Construction										
Pre-Engineered Building	LS	1	\$145,000.00	\$145,000	0.00	0	\$0.00	\$0		\$145,000
Building Erection	LS	1	\$145,000.00	\$145,000	0.00	0	\$0.00	\$0		\$145,000
Entry Canopy	LS	1	\$7,500.00	\$7,500	0.00	0	\$0.00	\$0		\$7,500
									Subtotal	\$297,500
DIVISION 14 - Conveying Systems										
NOT USED										
DIVISION 15 - Plumbing										
Water Closet (toilet)	EA	2	\$553.00	\$1,106	4.00	8	\$105.96	\$848		\$1,954
Water Closet Rough-In	EA	2	\$185.00	\$370	8.00	16	\$105.96	\$1,695		\$2,065
Lavatory and Faucet-Wall	EA	3	\$375.00	\$1,125	4.00	12	\$105.96	\$1,272		\$2,397
Lavatory Rough-In	EA	3	\$147.00	\$441	8.00	24	\$105.96	\$2,543		\$2,984
Urinal	EA	1	\$195.00	\$195	2.00	2	\$105.96	\$212		\$407
Urinal Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Janitors Sink	EA	1	\$125.00	\$125	2.00	2	\$105.96	\$212		\$337
Janitors Sink Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Shower and Faucet-Wall	EA	1	\$795.00	\$795	4.00	4	\$105.96	\$424		\$1,219
Shower Rough-In	EA	1	\$200.00	\$200	10.00	10	\$105.96	\$1,060		\$1,260
1/2" Type "L" Copper & Insul.	LF	200	\$2.10	\$420	0.20	40	\$105.96	\$4,238		\$4,658
3/4" Type "L" Copper & Insul.	LF	300	\$2.75	\$825	0.20	60	\$105.96	\$6,358		\$7,183
1" Type "L" Copper & Insul.	LF	20	\$3.48	\$70	0.40	8	\$105.96	\$848		\$917
1 1/4" Type "L" Copper & Insul.	LF	10	\$4.22	\$42	0.80	8	\$105.96	\$848		\$890
1 1/2" Type "L" Copper & Insul.	LF	10	\$5.11	\$51	0.80	8	\$105.96	\$848		\$899
2" Type "L" Copper & Insul.	LF	20	\$7.20	\$144	0.40	8	\$105.96	\$848		\$992
Emergency Eye Wash	EA	1	\$550.00	\$550	12.00	12	\$105.96	\$1,272		\$1,822
Hose Bibs	EA	5	\$50.00	\$250	1.00	5	\$105.96	\$530		\$780
Hose Bib Rough-In	EA	5	\$65.00	\$325	2.00	10	\$105.96	\$1,060		\$1,385
Water Fountain	EA	1	\$350.00	\$350	8.00	8	\$105.96	\$848		\$1,198
Miscellaneous Valves	EA	50	\$20.00	\$1,000	0.32	16	\$105.96	\$1,695		\$2,695
Backflow Preventer	EA	1	\$1,000.00	\$1,000	8.00	8	\$105.96	\$848		\$1,848
Sanitary & Vent Piping	LF	400	\$10.63	\$4,252	0.10	40	\$105.96	\$4,238		\$8,490
Wash Bay Equipment	EA	1	\$12,000.00	\$12,000	80.00	80	\$105.96	\$8,477		\$20,477
Water Heater	EA	1	\$1,500.00	\$1,500	32.00	32	\$105.96	\$3,391		\$4,891
Floor Drains (Trench)	LF	50	\$50.00	\$2,500	1.00	50	\$105.96	\$5,298		\$7,798
Compressed Air	LS	1	\$0.00	\$0	0.00	0	\$105.96	\$0	\$5,500	\$5,500
Miscellaneous	LS	1	\$300.00	\$300	8.00	8	\$88.61	\$709		\$1,009
									Subtotal	\$87,030

67K

CONCEPTUAL CONSTRUCTION COST ESTIMATE

			MATERIALS		LABOR					
ITEM	UNIT	QUAN.	UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST	OTHER COST	LINE TOTAL
DIVISION 15 - Fire Protection										
NOT USED										
DIVISION 15 - Mechanical										
Unit Heaters - Materials	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$12,000	\$12,000
Unit Heaters - Labor	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$4,500	\$4,500
Ductwork	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$16,000	\$16,000
Louvers	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$25,000	\$25,000
CO Detection System	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$17,000	\$17,000
Furnace, Cooling, Condensing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$22,000	\$22,000
Garage Exhaust Fans	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$8,000	\$8,000
Radiant Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$8,000	\$8,000
Recessed Cabinet Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Air Balancing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Miscellaneous	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$5,000	\$5,000
									Subtotal	\$121,500
DIVISION 16 - Electrical										
Service	LS	1	\$5,500.00	\$5,500	48.00	48	\$104.42	\$5,012		\$10,512
Connections to Mechanical	EA	18	\$150.00	\$2,700	2.00	36	\$104.42	\$3,759		\$6,459
Fire Alarm System	LS	1	\$5,500.00	\$5,500	120.00	120	\$104.42	\$12,530		\$18,030
Light Fixtures	EA	60	\$250.00	\$15,000	2.50	150	\$104.42	\$15,663		\$30,663
Receptacles	EA	50	\$75.00	\$3,750	4.00	200	\$104.42	\$20,884		\$24,634
Tele/Data Empty Conduit	LS	1	\$1,000.00	\$1,000	40.00	40	\$104.42	\$4,177		\$5,177
Tele/Data wiring & Equipment								\$15,000		\$15,000
Emergency Generator Hook-up	EA	1	\$0.00	\$0	0.00	0	\$104.42	\$0	\$6,000	\$6,000
Testing	LS	1	\$0.00	\$0	80.00	80	\$104.42	\$8,354		\$8,354
Commissioning	LS	1	\$0.00	\$0	40.00	40	\$104.42	\$4,177		\$4,177
									Subtotal	\$129,006
GRAND SUBTOTAL										\$1,606,082
OVERHEAD (10%)										\$160,608
SUBTOTAL										\$1,766,690
PROFIT (3%)										\$53,001
Building Permit (\$10/1000)										\$0
Bond (1.2%)										\$21,200
GRAND TOTAL										\$1,840,891

Floor - 7th
Apron
Wash Bay
Megasonic
Interlock